

1. An apparatus for processing a workpiece comprising:
a housing containing a chamber for holding a workpiece;
a fluid inlet leading into the chamber;
at least one fluid outlet at a peripheral region of the chamber for allowing fluid to
5 exit the chamber via centrifugal force; and

a sump connected via supply lines to the fluid inlet and the fluid outlet.

2. The apparatus of claim 1 further comprising a cup surrounding the
housing and positioned to collect fluid exiting the fluid outlet and to direct the collected
10 fluid to the sump.

3. The apparatus of claim 1 further comprising a plurality of workpiece
supports in the chamber for supporting the workpiece.

4. The apparatus of claim 1 further comprising a motor connected to the
housing for spinning the housing, to cause fluid to be distributed on a workpiece in the
15 chamber and through the fluid outlet via centrifugal force.

5. The apparatus of claim 1 with the fluid inlet aligned on an axis of rotation
20 of the housing.

6. The apparatus of claim 1 wherein the chamber conforms to the shape of
the workpiece.

7. The apparatus of claim 1 wherein the chamber is substantially closed.

8. The apparatus of claim 1 wherein the housing comprises a first rotor
engageable to a second rotor, to form the process chamber between them.

9. An apparatus for processing a workpiece comprising:
a first rotor;
a second rotor engageable with the first rotor to form a process chamber;
a plurality of workpiece supports on at least one of the first and second
rotors;
at least one fluid inlet in at least one of the first and second rotors;
at least one fluid outlet in the first rotor for allowing fluid to exit the
chamber; and
a sump linked to the fluid outlet and the fluid inlet.

10. The apparatus of claim 9 further comprising a motor connected to at least
one of the first and second rotors, for rotating the rotors.

11. The apparatus of claim 9 wherein rotation of the rotors draws fluid from
the sump, through the inlet, and into the chamber.

12. An apparatus for processing a workpiece comprising:
a housing containing a process chamber;

a motor for rotating the housing;
an inlet in the process chamber;
an outlet in the process chamber; and
recirculation means for supplying fluid from the outlet to the inlet via

5 rotation of the housing.

13. A method for processing a workpiece, comprising the steps of:
placing the workpiece into a process chamber;
rotating the process chamber and the workpiece;
10 introducing a fluid from an inlet onto the workpiece;
collecting fluid moving off of the workpiece via centrifugal force; and
pumping the collected fluid back to the inlet via a pressure differential
resulting from centrifugal acceleration produced by rotation of the chamber.

14. The method of claim 13 wherein the fluid is collected in a sump linked to
15 the inlet.

15. The method of claim 13 wherein the fluid moves out of the chamber via
centrifugal force and is collected in a cup surrounding the process chamber.

20 16. A method for processing a workpiece, comprising the steps of:
placing the workpiece into a process chamber;

rotating the workpiece and the process chamber;

applying a fluid to the rotating workpiece;

allowing fluid to move off the workpiece and out of the process chamber via centrifugal force;

- 5 collecting the fluid moving out of the chamber in a sump;
re-circulating the fluid from the sump back into the process chamber.

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